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STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition  
of the City of Oceanside for  
Review by the State Water  
Resources Control Board of  
Project No. 0598 Regarding  
Division of Water Quality  
Determination that Deminerali-  
zation System is Ineligible.  
B-26

ORDER NO. WQG 76-16

BY CHAIRMAN BRYSON AND MEMBER DODSON:

By letter dated January 20, 1976, the City of Oceanside (petitioner), requested the State Water Resources Control Board, (State Board) to review the determination of the staff of the Division of Water Quality (staff) declaring the proposed demineralization system for Project No. 0598 to be ineligible for grant funding.

A hearing in this matter was held by the State Board on June 15, 1976, with the record being held open for the submittal of additional information by both the petitioner and the staff.

I. BACKGROUND

The proposed project of the petitioner contained several elements. The project included a secondary treatment plant in the San Luis Rey Valley and a disposal system including an ocean outfall. In addition, the project included a reclamation portion consisting generally of a spreading recharge system, an extraction system for recovery of the water spread following underground filtration, and a demineralization facility to reduce total dissolved

solids after extraction. In substance, the petitioner proposed to discharge effluent from the new San Luis Rey treatment plant into spreading grounds for percolation into the underlying groundwater basin and then to extract it to supply irrigation users after demineralization.

The entire project received a grant and construction has been completed on the treatment plant and the disposal system.

Construction of the major portion of the reclamation facilities has been delayed pending determination as to whether the following condition placed on the Federal Grant Offer has been complied with:

1. Plans, specifications, and the ultimate capacity for the wastewater reclamation facility, including the demineralization facility, the activated carbon treatment system, the spreading grounds, extraction wells and all related appurtenances will not be approved until:
  - A. The City furnishes the State and EPA a comprehensive economic justification to demonstrate the cost effectiveness of wastewater reclamation in the City of Oceanside versus the importation of potable water. Such a study must include, but not be limited to, a discussion of the current groundwater basin hydrology, the economics and availability of imported water and the economics and demand for wastewater reclamation water.
  - B. The State and EPA receives satisfactory assurances that a market for reclaimed wastewater exists.

The staff determined by letter of December 17, 1975, that the demineralization system for Project No. 0598 was ineligible for grant funding. <sup>1</sup>

<sup>1</sup> While this letter specifically refers only to the demineralization system, the intent was to deny eligibility for the entire reclamation portion of the project and this was understood by the petitioner.

The petitioner has appealed this determination and as set forth in the Notice of Hearing, dated June 3, 1976, the sole issue involved is whether the reclamation facilities, including the demineralization system, are cost-effective when compared to the cost of the importation of potable water.

## II. BOARD POLICY REGARDING RECLAMATION

It is both state and federal policy to encourage reclamation facilities in the Clean Water Grant Program (California Water Code, Section 13500 et seq.; Section 201 (b), (d) and (g)(2)(B) of the Federal Water Pollution Control Act.) Additionally we have declared that reclamation of wastewater has a high priority in the State (23 Cal. Adm. Code Sections 2101, 2105, and 2108(g)) and are presently developing a Wastewater Reclamation Policy Action Plan that will facilitate the development of reclamation efforts in California. However, we would be doing a disservice if we funded other than solid projects where proper justification and analysis of the reclamation alternatives has been received. Such analysis is not yet present to support this project.

The staff has been hampered in their evaluation of this project due to the less comprehensive planning regulations in effect at the time this project was evolving. In particular, the staff felt constrained by a lack of data in the following areas: a detailed analysis of reclamation alternatives to the petitioner's proposal of percolation to the groundwater basin, extraction and demineralization; an analysis of environmental

impacts; a thorough discussion of waste discharge and treatment requirements; and a discussion of compatibility with local planning goals and objectives. While these areas are required to be considered under current Step I facility planning regulations and guidelines, this degree of planning was not required at the time the project evolved. Based on the above, the staff's recommendation that the Board place the petitioner's reclamation project on a current priority list for a Step I grant is deemed appropriate. This will enable the petitioner to develop the thorough analysis provided for under current regulation. In saying this, however, we want it well understood that we do not mean to slight the considerable effort the petitioner has engaged in developing this project. We recognize the petitioner as a pioneer in the area of reclamation, having reclaimed its wastewater since 1957. We commend and support petitioner's efforts in dealing with the problems of its groundwater. However, such support must be balanced against the cost elements involved-- costs to be borne largely by the taxpayers of the State and nation.

### III. CONTENTIONS OF PETITIONER

#### I. General

Petitioner contends that the reclamation project would produce water on a cost-effective basis when compared to the cost of the imported supply. For purposes of the hearing, petitioner reached agreement with the staff that "today's" cost of reclaiming water with the proposed reclamation facilities would be approxi-

mately \$186 per acre-foot. Petitioner also agreed with the staff that the cost of imported State Water Project water in San Diego County will be about \$91 per acre-foot for the Fiscal Year 1977-78. However, it is the petitioner's contention that any cost-effectiveness comparison should be based on the present cost of the reclamation/demineralization project versus the present day cost of the proposed next aqueduct system into San Diego County. Such a comparison, contends the petitioner, requires the addition of two factors to the \$91 per acre-foot cost which the staff has used as the cost of imported water. First, the petitioner would add in the cost of additional elements of the state aqueduct system that might be needed in the future. Secondly, the petitioner would compute the energy pumping costs of imported water based on petitioner's estimate of what future State power contracts will be. By so doing, the petitioner maintains that the total "cost" of imported water, even leaving out "sunk costs" for the existing aqueduct system would be \$192.62, compared to \$186 per acre-foot for reclaimed water. In addition, the petitioner feels the staff has erred in not including the "sunk costs" of the already completed importation system into the cost of the imported water.

## II. Sunk Costs

The petitioner has contended that the cost of imported water should reflect the capital costs of the state aqueduct system already in existence. However, such costs have already been incurred

and will remain unchanged by any decision regarding this project. That is, regardless of whether or not the reclamation scheme is constructed, these costs have been incurred. It is our opinion that where capital costs for water supply systems have already been incurred, they are not ordinarily relevant in a cost evaluation of a proposed reclamation project. If such were not the case, reclamation projects would be just as favorable from an economic cost-effectiveness standpoint in areas that already have an existing water supply system as in areas of present water shortage. While the EPA guidelines appearing in 40 CFR, Part 35 do not refer specifically to "sunk costs", an earlier Program Guidance document, PG-1, specifically stated that "sunk costs" such as existing facilities are not to be included in total capital costs for the purposes of economic analysis.

### III. Valuation of Power Costs Associated With Imported Water

Petitioner contends that the staff has erred in computing the energy costs of pumping imported water on the basis of current prices paid by the State pursuant to existing contract. Petitioner submits that this cost does not represent the actual present day cost of energy and thus does not represent the true cost of such energy. Petitioner speculates that when these state power contracts expire in the future, renegotiated rates for energy costs will increase some tenfold.

EPA guidelines on cost-effectiveness analysis provide that the various components of cost shall be calculated on the basis of market prices prevailing at the time of the analysis

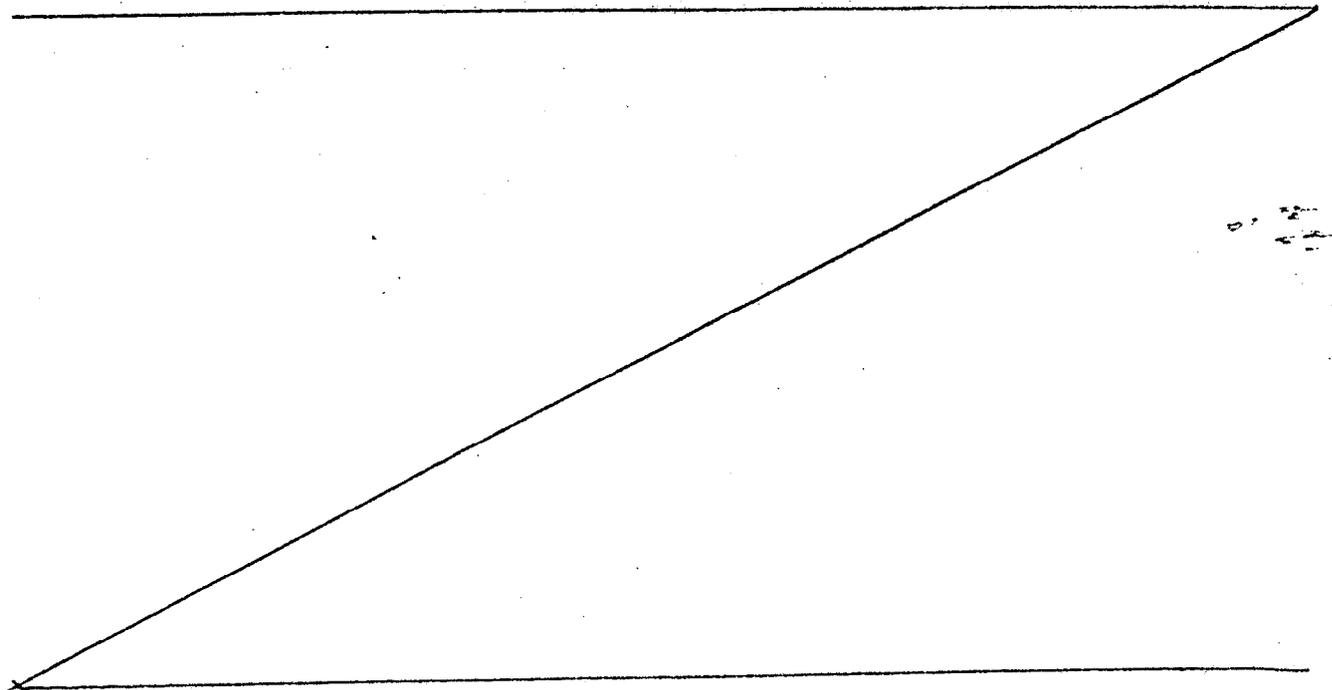
[40 CFR, Part 35, Appendix A f(4)]. The implied assumption is that all prices involved will tend to change over time by approximately the same percentage. However, the guidelines do permit exceptions to the foregoing if there is justification for expecting significant changes in the relative prices of certain items over the planning period. It is to this exception that petitioner's arguments appear directed. That is, petitioner contends that the power costs associated with the importation of State Water Project water will rise much more rapidly than the power costs of the reclamation project.

It may be that petitioner is correct in this contention. However, the petitioner has failed in persuading us that it has applied this principle to the issue of power costs. Petitioner states that the State power contracts will be renegotiated in 1981 and that the costs are expected to be about 2.5¢ per kwh. These contentions are conclusionary in nature; there is no evidence in the record to document their accuracy. To the contrary, information received by the staff from the Metropolitan Water District refutes petitioner's figures both as to the date the new power rates will become effective and the expected renegotiated price.

The petitioner, pursuant to the grant condition in question, has the burden of demonstrating the cost-effectiveness of the reclamation facility. It has failed to meet that burden conclusively in the case of power cost valuation, a major factor in the analysis.

IV. Costs of Future Importation System

Petitioner's final contention is to suggest a cost-effectiveness analysis comparing the cost of the proposed reclamation project versus the present day cost of a future aqueduct system into San Diego County. The petitioner has incorporated into its cost-effectiveness analysis costs of constructing a "fifth barrel" to the San Diego Aqueduct, the Sacramento Delta Peripheral Canal, the Tri-Agency Pipeline, and a new pipeline into the City of Oceanside. Even though the construction of these additions to the importation system appear highly speculative as to when and even if they will be built, the petitioner would add their cost to the present cost of imported system water for analysis purposes. For example, petitioner maintains that all the additional elements listed above will be built by 1981. There is no support in the record for this bare conclusion.



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Information received by the staff contradicts petitioner's conclusions regarding future additions to the state importation system. For example, to date there has been no decision made as to if and when a Peripheral Canal or other trans-Delta facility will be built. Similar uncertainties exist regarding the construction dates for the "fifth barrel" and the Tri-Agency Pipeline. A cost-effectiveness analysis cannot be conducted utilizing such uncertain data. It would be one thing to compare a reclamation alternative with a future aqueduct system where there were firm commitments as to construction dates, etc. But what the petitioner is suggesting in no way represents such an analysis. The staff's position is that the petitioner's analysis, which would compare the present costs for one alternative with highly questionable future costs for a second alternative is not acceptable. We agree.

#### IV. FINDINGS

1. The "sunk costs" of the existing importation system should not be considered in a cost-effectiveness analysis and comparison for a reclamation project. Such costs have been incurred.
2. Petitioner's valuation of future energy costs of the importation system is not supported.
3. The cost of any future importation system additions cannot be considered where such apparent uncertainty exists over the feasibility and timing of such additions.

4. The petitioner has not met its burden in furnishing comprehensive economic justification to demonstrate the cost-effectiveness of its reclamation system over other alternatives as required in the grant condition.

V. CONCLUSION AND ORDER

After review of the entire record, we conclude as follows:

1. That the petitioner has not demonstrated that its proposed reclamation project is cost-effective based on available information.
2. That the reclamation project should be placed on the current priority list in order that facilities planning can take place.

NOW, THEREFORE, IT IS ORDERED that:

1. The reclamation portion of the petitioner's Project No. 0598 not be funded at this time.
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2. That the petitioner's reclamation project be placed on the 1976-77 Priority List in an appropriate group so that a Step I grant award can be made.

Dated: October 21, 1976

We Concur:

/s/ John E. Bryson  
John E. Bryson, Chairman

/s/ W. Don Maughan  
W. Don Maughan, Vice Chairman

/s/ Roy E. Dodson  
Roy E. Dodson, Member

/s/ W. W. Adams  
W. W. Adams, Member

/s/ Jean Auer  
Jean Auer, Member